

**Translation**

**PATENT COOPERATION TREATY**

PCT/EP2003/050775



**PCT**

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>GEBS200253PC</b>		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/EP2003/050775</b>	International filing date (day/month/year) <b>31 October 2003 (31.10.2003)</b>	Priority date (day/month/year) <b>04 November 2002 (04.11.2002)</b>	
International Patent Classification (IPC) or national classification and IPC. <b>C08G 77/54, D06M 15/643</b>			
Applicant <b>GE BAYER SILICONES GMBH &amp; CO. KG</b>			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand <b>25 May 2004 (25.05.2004)</b>	Date of completion of this report <b>17 March 2005 (17.03.2005)</b>
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
 pages 1-48, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages 1-14, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 9, 10, 13, 14

because:

☐ the said international application, or the said claims Nos. \_\_\_\_\_  
relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 9, 10, 13, 14  
are so unclear that no meaningful opinion could be formed (*specify*):

See the supplement sheet

☐ the claims, or said claims Nos. \_\_\_\_\_ are so inadequately supported  
by the description that no meaningful opinion could be formed.

☒ no international search report has been established for said claims Nos. 9, 10, 13, 14

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: III.

The subject matter of claims 9, 10, 13 and 14 does not constitute a coherent technical teaching and is so unclear that no international preliminary examination can be carried out for it, nor can an international preliminary examination report be established for it.

According to method claim 9, a set ratio of  $V^2:V^1$  of  $< 1:3$  is to be maintained. As explained below in Box V, it is entirely arbitrary which molecular segments are considered as  $V^1$  and  $V^2$ , except that  $-Z^2-$  should count as part of  $V^2$ . Hence, the setting of a specific ratio of  $V^2:V^1$ , as specified in point a) of this claim, does not constitute a coherent technical teaching.

The claim further describes, below point a), d) parallel multiple reactions of unspecified mono- and/or diamino compounds with unspecified organic compounds, said reactions in some cases to follow in multiple succession, where at any stage of any reaction b) one mole of an organic compound is used and at any last stage of any reaction a 1:1 stoichiometry must obtain.

The subjects of claim 9 and the claims 10, 13 and 14 relating to it thus do not constitute any discernible technical teaching. Therefore, these subjects were not searched, and there can therefore be no international preliminary examination carried out or international preliminary examination report established therefor.

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims		YES
	Claims	1-8, 11, 12	NO
Inventive step (IS)	Claims		YES
	Claims	1-8, 11, 12	NO
Industrial applicability (IA)	Claims		YES
	Claims	1-8, 11, 12	NO

**2. Citations and explanations**

Reasoned statement with regard to the novelty of claims 1-8, 11 and 12 under PCT Article 33(2):

D1 WO02/10257A

D2 WO02/10256A

D3 WO02/10259A.

1. The present application does not meet the requirements of PCT Article 33(2) because the subject matter of claims 1-8, 11 and 12 is not novel.

1.1 The present application discloses linear polyamino and/or polyammonium-polysiloxane copolymers with the repeating unit  $-[Q-V]-$ , where Q is a quaternized or quaternizable bivalent or trivalent nitrogenous organic radical of the formulas indicated in claim 1, and V represents at least one hydrocarbon radical  $V^1$  and at least one hydrocarbon radical  $V^2$ ,  $V^1$  and  $V^2$  being distinguished only in that  $V^2$  necessarily has a bivalent organopolysiloxane group  $-Z^2-$  with  $n_1 = 20-1000$ .

The "hydrocarbon radicals" are optionally broken

*inter alia* by -O-, -C(O)-, etc., groups, and optionally OH substituted.

Because  $V^1$  and  $V^2$  may also be situated side by side in the molecule, it is arbitrary which molecular segments are taken as  $V^1$  and  $V^2$  except that  $-Z^2-$  should count as part of  $V^2$ . A set molecular ratio of  $V^1:V^2$  is thus selected arbitrarily and says nothing about the structure of the molecule. It therefore cannot establish novelty. This has not been refuted by the arguments put forward in the applicant's letter of 6 October 2004.

Considering, for example, the molecule in example 8 on page 89 of D1, one sees that the linear polyamino and/or polyammonium-polysiloxane copolymers there are covered by the current claims 1 to 3 and 5 to 8, since the monoquaternized piperazine radicals are covered by the formulas for Q in claims 1 to 3 and 5 to 8 and the molecule also has hydrocarbon radicals  $V^1$  and  $V^2$ , one of which ( $V^2$ ) with a bivalent organopolysiloxane group  $-Z^2-$  with  $n_1 = 32$  ( $n_1$  defined as in claim 1 of the present application).

The measure that Q should not bond to carbonyl also holds for example 8 of D1, for the nitrogen radicals of the piperazine radicals are not attached to a carbonyl group.

The subjects of the current claims 1 to 3 and 5 to 8 are therefore no longer novel.

The current claim 4 defines  $V^2$  in that  $-Z^2-$  sits between two hydrocarbon radicals as defined above ( $V^2$ \* stated). This feature too is covered by the structural formula of the polyammonium-polysiloxane copolymer disclosed in example 8 in D1.

The subject matter of claim 4 is therefore no longer novel.

The polyammonium-polysiloxane copolymers disclosed in D1 are given in cosmetic formulations and used as softeners for washing fibers and fabrics and for preventing or eliminating fabric creasing - see D1, page 3, first to third complete paragraphs.

The subjects of claims 11 and 12 are therefore no longer novel.

- 1.2 As long as  $V^1$  and  $V^2$  and  $Q$  are not defined more concretely and unambiguously, the subjects of claims 1-8, 11 and 12 are not novel in relation to not only D1, example 8, but D2, examples 2 and 3 and D3, example 1, as well.

2. As to inventive step under PCT Article 33(3), it should be noted:

The problem addressed by the application can be seen as that of providing further internal softeners that yield good feel (see example 6 in the present application).

The examining division cannot at present see how the applicant can delimit the application from the prior art.

If nevertheless  $V^1$  and  $V^2$  and  $Q$  can be concretely and unambiguously defined in contradistinction to the prior art so that a specific range for the  $V^1:V^2$  ratio can be given meaningfully, unambiguously and definitively to establish novelty, such a range would not solve any problem in relation to D1, for D1 has already solved the above problem. The table

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at the top of page 96 in D1 does show that soft-feel polyammonium-polysiloxane copolymers suitable as fabric softeners exist for the entire range of D1's disclosure (i.e. within and beyond the range of the  $V^1:V^2$  ratio defined in the present application).